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MONTHLY REPORT

[redacted]

25X1

PAR 202

24 Dec 64

SUBJECT: Briefing Print Enlarger

TASK/PROBLEM

1. To design and build a prototype enlarger for exposing high-quality briefing prints in formats up to and including 20 x 24 inches in size. Magnification to be in the 10 - 60 diameter range. The enlarger will be able to produce both black-and-white and color prints. Changing from one capability to the other should be made with a minimum of effort.

DISCUSSION

2. This project is proceeding in close correlation to the work on PAR 224. Work on these projects during the period has been on the following breadboard equipment:

a. Vacuum Platen Carriage: The design layout of the Platen Drive and Position Indicator is completed.

b. Main Frame: Detail drawings for the lower frame assembly including the shock mounts are completed. The drawings of the optical frame are complete except for interface designs with the objective lens focus assemblies, the lamphouse assemblies and the platen drive assembly.

c. A rough breadboard test was made of a four-inch square vertical fluid gate. By using rectangular glass plates to form the gates and placing the plates in contact along the bottom edge with the top edge open before injecting immersion fluid, successful wetting of the full gate area, upon closing it, was achieved.

d. Work continued on layouts of the condenser and lamphouse assembly.

e. Preliminary design studies were made on the projection lens focus assemblies.

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f. Model fabrication of the X-Y coordinate indicators is nearing completion.

g. Authorization was given for fabrication of sample lenses of the 24X to 40X "combination" lens design and of the 38X to 62X black-and-white lens design.

PLANNED ACTIVITY

3. Effort in the next period will be to:

a. Revise and test the computer program for the Focus and Magnification Table.

b. Complete the objective lens designs and begin sample fabrication.

c. Continue the release of parts of the breadboard model for fabrication.

d. Continue layout work on the lamphouse and objective focus assembly designs.